

# Open Research Online

---

The Open University's repository of research publications and other research outputs

## Responding to a 'flood of criticism': analysing the ebbs and flows of planning and floodplain development in England (1926–2015)

### Journal Item

How to cite:

Potter, Karen; Ludwig, Carol and Beattie, Charlotte (2016). Responding to a 'flood of criticism': analysing the ebbs and flows of planning and floodplain development in England (1926–2015). *Town Planning Review*, 87(2) pp. 125–138.

For guidance on citations see [FAQs](#).

© [not recorded]



<https://creativecommons.org/licenses/by-nc-nd/4.0/>

Version: Accepted Manuscript

Link(s) to article on publisher's website:  
<http://dx.doi.org/doi:10.3828/tpr.2016.11>

---

Copyright and Moral Rights for the articles on this site are retained by the individual authors and/or other copyright owners. For more information on Open Research Online's data [policy](#) on reuse of materials please consult the policies page.

---

Karen Potter<sup>1</sup>, Carol Ludwig<sup>1</sup> & Charlotte Beattie<sup>2</sup>

Policy and Practice

## *Responding to a ‘Flood of Criticism’ – Analysing the Ebbs and Flows of Planning and Floodplain Development (1926-2015)*

### **Abstract**

The ‘flood defence’ role of the planning system, in minimising inappropriate development on floodplains, has again been underlined following extreme flood events in the winter of 2013–14. Yet planners are alleged by politicians and the media to ignore expert advice and ‘wave through’ developments on floodplains. Set against an enhanced understanding of the political pressure that planners have faced for indiscriminate new development over the past nine decades, it is claimed greater transparency and accountability is required in the decision making process, with an increase in public sector capacity and provision of skilled planners, to negotiate sensible, strategic and more resilient housing solutions.

### **Introduction**

It is estimated that around five million properties in England are currently at risk of flooding from rivers, the sea, or from surface water. Following the flooding of 7,800 homes in the winter of 2013–2014 with an estimated cost of £1.1 billion in insurance claims (ABI, 2014), the Climate Change Adaptation Sub-Committee’s Progress Report underlined the crucial ‘flood defence’ role that the planning system has to play by minimising development on floodplains (Committee on Climate Change, 2014). Previous analysis by the UK Government’s official climate change adviser in 2012 had concluded that on average 13 per cent of all new development was on the floodplain, with 200,000 new homes having been built on floodplains between 2001 and 2011 (Committee on Climate Change, 2012). In the wake of the 2013–2014 floods - whilst the media asked ‘why do we insist on building on floodplains’ with the implication that local planning authorities had been ignoring the Environment Agency’s (EA) advice and ‘waving through’ developments on flood-prone land (Bawden & Clerk, 2014; Wills, 2014), the then Secretary of State for Communities and Local Government (DCLG) Eric Pickles reported to Parliament that the level of development on flood-risk areas was at its lowest rate since modern records began and that 99% of planning applications for

<sup>1</sup> Karen Potter and Carol Ludwig are lecturers in the Department of Geography, University of Liverpool, Gordon Stephenson Building, 74 Bedford Street South, Liverpool L69 7ZQ; karen.potter@liverpool.ac.uk and c.ludwig@liverpool.ac.uk. Charlotte Beattie is Chartered Senior Analyst at JBA Consulting, Bank Quay House, Sankey Street, Warrington, Cheshire, WA1 1NN; Charlotte.Beattie@jbaconsulting.com. All authors are former local planning authority practitioners involved with flood risk management, Charlotte Beattie also Senior Flood Management Officer and author of Wrexham County Borough Council’s Local Flood Risk Management Strategy.

new homes in flood-risk areas were in line with expert advice. Though many floodplain developments are currently considered well protected by engineered flood defenses, one in five are deemed to be in an area at significant risk. Against this background, and as floodplain developments become increasingly costly to protect and insure, the Adaptation Sub-Committee (2014) have stated that the planning system has a responsibility to prevent further inappropriate development on floodplains, to minimise the build-up of long-term vulnerability to future flooding. In light of the two extremes outlined above, this article explores whether planners are recommending that inappropriate development on floodplains be granted planning consent, or, if the vast majority of housing developments are being approved in line with expert advice. More specifically, drawing from an archive review and of policy documents, academic literature and newspapers from the 1926 to 2015, it aims to provide an overview of the historical context to the current position regarding the relationship of land use planning and floodplain management – in order to urge greater transparency and accountability in decision making processes against the “flood of criticism” from politicians and media that planning poses an obstacle to England’s economic growth (Tewdwr-Jones, 2015, 85).

## **An historical account of floodplain development; planning policy and practice**

Historically dwellings were built above the level of normal floods (Werrity, 2006). The marshy floodplains of the rivers and streams which traversed towns and cities formed obstacles to urban extension, and instead they marked out miniature intra-urban green belts of parks and recreation grounds as the land was considered ill-suited for other uses (Stedman, 1958). In 1926, for example, members of the Garden Cities and Town Planning Association, in considering various locations where Oxford City Council had housing schemes under consideration, stated ‘all the riverside land, liable to flood, should be reserved so as to be kept entirely free from building of any kind, as it was suitable neither for industry nor for residence and, therefore, the cost of reservation would be very little indeed’ (The Times, 1926, 15). Following major flood events in 1928, the Times Correspondent commented upon the wisdom of these earliest town planners as the floods ‘held no terrors’ for the town; ‘if the frost had come upon us this week we should almost have been able to skate around Oxford....the green belt, of which a good deal has been written during the winter, has been marked out by the flood as if it were a recently drained moat’ (Times, 1926, 9).

It was from the 1940s that the established ‘common sense’ avoidance of floodplains for settlement seems to have broken down. The acute shortage of building land in towns and cities coupled with the availability of freshly drained, flat agricultural land as a consequence of the Land Drainage Act (1930), meant land previously viewed as unsuitable was used to meet post-war housing demands (Potter, 2013; Stedman, 1958; Werrity, 2006). Further pressure to build mounted during the baby boom of the 1960s, as planners faced calls from the Minister for Housing and Local Government, Dr. Charles Hill, to provide a more efficient ‘machine’ to deal with development and land use problems, in the context of pressures created by a projected population increase in England over the next 20 years of well over four million. The government view was that this had to be catered for and Hill argued that ‘planners must do more to meet the challenge of a booming population and a bursting economy’ adding that ‘planners must not be afraid to experiment’ (Times, 1961, 6). Local government was reorganised to provide a more efficient system for development, the Town and Country Planning Act 1971 aimed to intensify and streamline economic growth (Grove-White, 1991), accompanied by intensive lobbying by developer interest groups. Following the oil crisis, and the deep recession of the late 1970s, the Conservative Government of the early 1980s looked to ‘reduce bureaucratic obstacles to the freer working of markets’ and ‘radically recalibrate and refocus the planning system to encourage the freer and more creative play of market forces’ to by-pass what they viewed as local authority ‘obstructionism’ (Grove-White, 1991, 32). This drive towards liberalisation of planning control had implications for a number of domains of planning, including the consideration of applications for development on floodplains. Development on the latter increased

despite a growing understanding of the impacts of urban growth on river systems, as documented by geographers and engineers from the late 1960s onwards (e.g. Coates, 1974; Leopold, 1968; Jens and McPherson, 1964; Savini and Kammerer, 1961; Schaake, 1972; Schmid, 1974; Speiker, 1969; Walling and Gregory, 1970; Wolman, 1967 in Douglas, 1976). Douglas (1976), for example, described these and consequent water management problems in great detail from the establishment of every new building, or road, to the loss of domestic gardens. He argued that collectively such incremental changes could alter the stability of river channels, the heights or frequency of floods and the volume of base flow in rivers, and that 'consequently the planning decisions and construction activities of one authority or agency may produce hazards and even losses for another authority or agency' (Douglas, 1976, 65).

However, it was not until the shock flood events of the 1990s and the turn of the century that nature, aided by the media, drew attention to what they considered the 'aggressive process of urbanisation that had ripped across the newly civilised flood plains', for the *Times* newspaper (2000):

Nothing could be stupider or more likely to lead to trouble. Flood plains are nature's way of controlling rivers that burst their banks.....Attempts to regulate rivers have also made things worse.....Time and time again this foolish engineering has led to disaster.....Yet half the 90,000 British planning applications each year are for building on land at risk of flooding. As the Environment Agency now suggests, they should be routinely refused. (27)

John Prescott, the Deputy Prime Minister of the Labour Government elected in 1997, declared that the floods of 2000 following the wettest autumn on record were 'a wake up call for everyone' (Moss, 2007, p121). The Government announced stricter rules to prevent development on land at risk of flooding, with Planning Policy Guidance (PPG) 25 (DETR, 2000) being their 'attempt' to deter development in flood plain areas via the planning process (Brown and Damery, 2002). Sir John Harman, chair of the Environment Agency stated that in England and Wales, nearly 10 per cent of the existing housing stock was at risk from flooding, and the planning system provided the greatest opportunity through which to make sustainable choices for development in the future (The *Times*, 2000). The Environment Agency was to class areas at risk from flooding as either 'functional flood plains' or 'high risk'. New development could be allowed after 'strict scrutiny', but the developer would be deemed responsible for the cost of maintaining flood defences for the lifetime of the property concerned. Yet, despite such requirements, media reports in following flood events of 2001 claimed that 'the Agency had seen no let up in developments on flood plains and expects 342,0000 new homes to be built in such areas in England and Wales in the next two decades'. Elliot Morley, the Flood and Coastal Defence Minister was reported to say that in 'scores of cases, councils ignore the objections of the Environment Agency, which is responsible for flood warnings, and allow developments in areas at risk' (*Times*, 2001).

With the shock flood events and the future possibility of greater frequency and severity of flood events, it became increasingly apparent that the institutional and legislative arrangements for managing land use and flood risk required stricter reform (Brown and Damery, 2002). This relationship was duly explored in the 2004 Foresight Future Flooding project, which concluded that urban development illustrated some of the most obvious effects of land use change on water management (Evans *et al.*, 2004; Wheeler and Evans, 2009). The report detailed how increased development had led to the engineered disconnection of the river from its floodplain, and reminded readers that 'floodplains have precisely the function that their name suggests; rivers can be expected naturally to flow beyond their banks every few years. The natural functioning of a floodplain is to store and subsequently release floodwaters, attenuating a flood as it travels downstream' (Wheeler and Evans, 2009, 259). As vegetated soils are replaced with impermeable surfaces, overland flow is increased and infiltration reduced which bypasses the natural storage and attenuation of the land's subsurface. Overland runoff is conventionally collected by piped storm-water drainage systems and

conveyed rapidly to the nearest stream, the result being a greater volume of runoff, discharging in a shorter time, potentially leading to dramatically increased flood peaks (Wheater and Evans, 2009). From the 'Future Flooding' analyses, land use ranked alongside engineering as the most powerful tool in controlling future flood risk, with the need to balance the wider economic, environmental and social needs for land use, especially the demand for new housing, against creating a legacy of flood risk. Yet the challenge of finding the space through riverside towns and cities to accommodate flood flows up to 40 per cent greater than average was acknowledged to be great, not only in engineering terms, but particularly to urban planning and sat awkwardly with the Government's drive to reuse brownfield sites. It was believed to be controversial to ban redevelopment of brownfield sites that lay in the floodplain, but behind well-managed flood defences affording a high standard of protection. Instead, the report called for more sharply targeted policy instruments to affect future urban flood risk including, renewal of existing urban spaces, new urban forms, new densities of development, more green space and encroachment into green belts. Without taking action, the risk of flooding and coastal erosion was predicted to increase greatly over the next 30 to 100 years; the number of people in England at high risk from flooding to increase from 1.4 million to between 2.0 million and 3.3 million; and, the expected annual economic damages to properties to increase from £0.9 billion to between £1.5 and £20 billion.

In 2005, the Government Department for Environment, Food and Rural Affairs (Defra), now responsible for the policy framework, strategic guidance and legislation for flood management and water resources in England, called for a 'more strategic, integrated approach' to managing floods across a whole catchment. Defra's new 'Making Space for Water' (MSfW) strategy included and emphasised the importance of a coordinated approach to land use, planning policy and urban design (Defra, 2005). In line with MSfW, the Office of the Deputy Prime Minister (ODPM) replaced Planning Policy Guidance 25 in 2006 with Planning Policy Statement 25 (PPS25) to strengthen the roles and responsibilities for developers, regional and local planning bodies and authorities, in a more strategic, rigorous and systematic approach to the development decision-making process regarding flood risk (Goodson, 2011; Johnson *et al*, 2007). Strategic, regional, area and site level flood risk assessments (FRAs) were introduced as one of the tools for coordinating effective planning for sustainable development. Amendments to article 10 of the Town and Country Planning (General Development Procedure) Order 1995, meant planning authorities had a statutory duty to consult the EA on all development in areas at risk of flooding (except 'minor development') in fluvial or coastal flood risk areas and on any development exceeding 1 ha (Goodson, 2011). If the EA objected, but the LPA remained minded to approve an application for major<sup>2</sup> development, then under the Town and Country Planning (Flooding) (England) Direction 2007, the Secretary of State for Communities and Local Government was provided with the opportunity to check the application's general compliance with the policies in PPS25, and call it in for determination if appropriate (Communities and Local Government, 2006). It is notable that the PPS included an 'exceptions test' in areas liable to flooding where some continuing development could be considered necessary for wider sustainability reasons and to avoid social and economic blight (Johnson *et al*, 2007). What was particularly absent from these changes however was any consideration of 'minor' applications, of which there are some 12,000 on floodplains every year (Smulian, 2015). Sequential and Exception Tests do not need to be applied to most of these developments and the cumulative impact of such 'minor' incremental growth of impermeable surfaces thus bypassed EA scrutiny.

In July 2007, as waters inundated swaths of central and western England following the wettest May to July since records began in 1766 (EA, 2007), the media was again awash with political opinion following the announcement of the government's ambitious new plans to build three million

<sup>2</sup> Major development defined in The Town and Country Planning (Flooding) (England) Direction 2007 as: (a) in respect of residential development, a development where the number of dwellings to be provided is 10 or more, or the site area is 0.5 hectares or more; or (b) in respect of non-residential development, a development where the new floorspace to be provided is 1,000 square metres or more, or the site area is 1 hectare or more.

new homes by 2020 (BBC News, 2007; Branigan, 2007). Eric Pickles, then Shadow Communities Secretary proclaimed that the Prime Minister 'Gordon Brown has to accept the inconvenient truth that if you build houses on flood plains it increases the likelihood that people will be flooded' (BBC News, 2007). Housing Minister Yvette Cooper warned her critics not to 'play politics' with the floods as the Government's green paper on housing, 'Homes for the future: more affordable, more sustainable' was published, which promised £8bn of investment in affordable housing and explained how the government would build 3m more homes by 2020. Cooper warned that, without action, housing could become one of the greatest sources of social inequality, and there would have to be a significant increase in house building over the next decade to keep up with demand and, as long as the proper defences were in place, it was inevitable that some of these new homes would be built on floodplains (Wilson, 2007; Directgov, 2007). The Conservative Party voiced concern that 'the Government's proposals would lead to further flooding and misery in the years to come', with Grant Shapps, the Shadow housing minister, telling MPs in Parliament that; 'We can expect more flash floods of the type we have experienced in recent days and weeks. Labour aren't planning the eco-towns of the 21st century, they are planning the sink estates of tomorrow' (Wilson, 2007).

Sir Michael Pitt's Report following his independent review of the Summer floods of 2007 made it clear (again) that Britain was not as well prepared as it should have been and that planning controls in flood risk areas were not applied rigorously enough. 10 per cent of properties in England were now located on the floodplain, with 11 per cent of new homes in England having been built in flood hazard areas since 2000, and 16,000 dwellings built in high flood risk areas in 2006. Around a quarter of properties that had flooded in summer 2007 had been built in the last 25 years. This, Pitt stated, emphasised the vital importance of strong planning controls as the 'images of flooded developments during the summer of 2007 brought home vividly the importance of well-informed development control decisions' (Pitt, 2008, 61). The Pitt Report recommendations 7 and 8 detailed respectively that 'there should be a presumption against building in high flood risk areas, in accordance with PPS25, including giving consideration to all sources of flood risk, and ensuring that developers make a full contribution to the costs both of building and maintaining any necessary defences' and that 'the operation and effectiveness of PPS25 and the Environment Agency's powers to challenge development should be kept under review and *strengthened* if and when necessary [emphasis added]' (Pitt, 2008, 71).

The 2008 Pitt Report led to fundamental legislative change through the Flood and Water Management Act 2010, which identified new responsibilities and a duty of cooperation between all relevant authorities. Defra remains the lead government department in developing flood risk management policy. The EA has been given the strategic overview for flood risk management, and is also responsible for flood risk management activities on main rivers. The Act provided for 'Regional Flood and Coastal Committees' (RFCCs), to play a key role in the co-ordination of flood risk management by advising on and approving flood defence programmes of work for their areas, but also in assisting the scrutiny of local authority risk assessments, maps, and plans required by the EU Floods Directive (Directive 2007/60/EC). 'Lead local flood authorities' (LLFAs), working closely with RFCCs, are to prepare and maintain a strategy for local flood risk management and how it will be managed in 'partnership' in their areas. In retrospect, momentum for planning reform in flood risk management institutional arrangements possibly peaked at this time in 2008, before the financial crisis top trumped nature's flooding as 'shock event' to drive policy change. The Times Newspaper (2008) Correspondent's metaphorical use of 'flood language' as the shockwaves, triggered by the collapse in US securities, stock market slumps and bank bailouts, hit British shores in 2008:

Across the vast, soggy floodplain of global finance, small knots of financial refugees are emerging from their emergency shelters, sharing war stories, bucking each other up, perhaps even permitting themselves a smile or two as they look back with a shudder on the events of the past month. The waters haven't receded completely, of course. But they

have stopped rising..... A deep and potentially long recession, the worst in at least a quarter of a century, seems inevitable (Baker, 2008).

The final years of 'New Labour' governments saw further steps to concentrate the institutions of regional planning on economic development goals (Cowell, 2010). However, in what Cowell (2010, 952) described as a 'somewhat breathtaking pace of change in the structure of English planning', the Conservative/Liberal Democrat coalition government, which came to power in 2010, announced further planning reform as key to the country's economic recovery and a tool for economic growth. The Coalition's objective to roll back 'red tape' and get 'planners off our back', to 'cut through the dither' that was apparently holding Britain 'in paralysis' led to contentious measures to relax rules on planning applications 'in an attempt to reverse the chronic shortage of housing and boost the flagging economy' (The Times, 2012, 24). The resultant National Planning Policy Framework for England reduced former planning policy from more than 1,000 pages to less than 100, to pave the way for swifter, clearer development decisions. Otto Thoresen, director-general of the Association of British Insurers, immediately expressed concern that the framework could lead to a greater level of inappropriate development in flood risk areas. The result, he predicted, would not be the 'stimulation of the economy', but 'misery for people when their homes are flooded' (Times, 2012, 24). The National Flood Forum's chairman, Charles Tucker, similarly argued that the new framework had 'at a stroke, scrapped the carefully constructed raft of technical guidance, context and definitions built up over years' for flood protection (Telegraph, 2011). The Chartered Institute of Water and Environmental Management's (CIWEM) Executive Director, Nick Reeves (2011), noted that planning was not so simple, and that it needed to consider a wide range of factors which affect people's quality of life:

Surely a new planning framework is an opportunity to do things better? But, sadly, this Government's proposals are little more than a builders' charter and a sop to the powerful construction lobby. Developers will be rewarded while neglecting sustainability and the environment. There is no presumption in favour of sustainable development; it is just that of development, cynically green-washed.

The fact that the present system seemed 'like a lumbering leviathan' was attributed by Reeves to low resources in local authority planning departments. Moreover, he believed the Government had confused clarity with brevity, and communities and their environments would suffer as a result.

### **So - do planners 'insist on waving through inappropriate development on floodplains', or are homes 'sensibly approved in line with expert advice'?**

The former Secretary of State for Communities and Local Government (2010-2015) Eric Pickles' boast to Parliament, cited in the opening paragraph above, claimed that 99% of planning applications for new homes in flood-risk areas are in line with expert advice. However this related only to the cases where the EA have been informed. Defra's High Level Target 5 (HLT5) dating from 2001 for Local Planning Authorities (LPAs) to report on how well they had taken into account the EA's advice on flood risk, and to be named if they had not followed EA advice, was rescinded in 2008 (EA, 2012). This was replaced by an annual Development and Flood Risk Report, containing a 'less detailed version' of the impact of the EA's flood risk technical advice on planning decisions made by English local planning authorities. In a survey commissioned by the Committee on Climate Change (CCC, 2014b) of a sample of development applications within flood risk areas from 42 Local Authorities, 4060 applications were identified where the EA had lodged an objection on flood risk grounds. Further analysis of the 4060 applications found that the EA had only been provided with decision information in 57% of the development cases where they had originally stated an objection.

This fact is noted by the Adaptation Sub-Committee on Climate Change who conclude that development on floodplains is ‘continuing below the Government’s radar’ and is in fact ‘taking place at a faster rate than [in] other areas’ (CCC, 2014a, 4). As the Committee’s report concluded, if Local authorities maintained the former reporting mechanisms to record the number of planning applications which have proceeded contrary to the EA’s advice, this would aid an evaluation of the true effectiveness of national policy to limit inappropriate development in flood risk areas. Furthermore, the ASC warn of the effects of ‘minor’ planning applications in the floodplain to which the Environment Agency do not respond noting that – ‘these are not recorded by planning authorities, the Agency, nor central government’, hence we are unable to assess the cumulative impact of this development on flood risk. As Howard stated back in 2009 regarding climate change adaptation more broadly; this is ‘not a task for which planning is constitutionally well equipped’ due to the ongoing influence of ‘the political and economic forces that powerfully shaped the profession (Howard, 2009, 30).

Key elements of the former PPS25 have been retained in an accompanying National Planning Policy Framework (NPPF) Technical Guidance document, though there is arguably a shift in emphasis within the flood risk management policy arrangement to ‘resilience’ aligned with what might be seen as a more neo-liberal ideology under which ‘the object to be governed has to some extent shifted from actual flood waters, to those citizens at risk of flooding and the agencies or organisations with designated responsibilities’, that is local councils and the EA (Butler & Pidgeon 2011). The scope for resilience and adaptation at the individual property level is not supported by the Government’s decision to scrap the Code for Sustainable Homes ‘as part of its ‘bonfire of red tape’ in the housebuilding sector’ (Wainwright, 2014). Paradoxically, as Defra has sought to strengthen the strategic focus of Flood Risk Management Authorities, DCLG’s 2011 dismantling of regional planning bodies and strategies through the Localism Act, has revealed the planning vacuum in enabling a joined up strategic response to planning for flood risk. District Councils, with high percentages of land on floodplains are consequently under pressure to meet housing and other development needs *locally*, rather than see it regionally re-allocated to areas with lower flood risk. While the Government could perhaps argue that the ‘duty to cooperate’ outlined within the Localism Act (2011) fills such a void, there is little evidence to date to suggest that this is an adequate replacement for the pre-2010 planning framework.

The historical overview above has revealed successive waves of pressure for new development and the cutting of red tape across the decades. We now look forward to the next chapter in the relationship between land use planning and floodplain management. Following the Conservatives’ election to power in May 2015 it is already possible to observe some early indications of the direction of travel. For instance, based on Conservative Secretary of State for Communities and Local Government Greg Clark speaking ahead of his first meeting of a dedicated ministerial Housing Taskforce, such early indications are that the new political term will again be symbolised by the release of land for house building as an important part of the Government’s long-term economic plan. Leading ‘the charge for Whitehall departments to let go of surplus and redundant land and property for new homes – and for town halls to follow suit’, with his target of enough land for 150,000 homes by 2020, Clark is calling on England’s 326 councils to ‘look at the land assets they hold, and use some of those plots, particularly those on brownfield sites, to provide new homes for their communities’ (Clark, 2015).

As many brownfield sites are in the floodplain following their historic industrial use on river and quaysides, the contradictions raised by Foresight’s ‘Future Flooding’ report of 2009 have not gone away – whilst there are strong reasons to protect green field and green belt sites, the re-development of some brownfield land could substantially increase flood risk. Indeed, the cumulative impact of small-scale floodplain development, on which the Environment Agency is not required to provide advice builds, thus incrementally intensifying the level of flood risk. The NPPF states that ‘inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk, but where development *is* necessary’ it should be made safe ‘without



increasing flood risk elsewhere' (DCLG, 2012, 23). Such guidance raises the question of how 'what is *necessary*' is defined? Local planning authorities are told, if they are not clear about an application, they can seek the advice of the Environment Agency - a body which has seen the numbers of staff engaged in planning and development control reduced by 40% since 2010 (CCC, 2014a). Local authority spending is itself also under increasing pressure, and with the abolition of the National Indicator set (NI188 Climate Change Adaptation) some of the funding provided for managing local flood risk is being diverted to other core council services.

If boosting growth and providing homes for 'hard working families' remains a political priority, compromises will have to be made. Flood risk, of course, is only one of the constraints and objectives that planners need to weigh in their decision-making. Experience over several decades, not just during the Winter floods of 2014, reminds us of the devastation that flood events can cause to communities, and strongly suggests that planning for *sustainable* development goes beyond simply building to meet housing need and demand. It must also give due consideration to the social, economic, environmental and human rights impacts of such decisions. Will the Government reassess future public sector capacity and make provision for skilled and empowered staff? The skills and powers arguably required are those to: negotiate housing solutions with developers; understand technical assessments; robustly analyse assumptions and the level of complexity around the probability, frequency and source of flood risk; comprehend the importance of uncertainty; and foster a strategic resilience approach in the face of what may be judged to be other necessary considerations and alternative locations for development? Writing back in 2004, Kelly et al. argued that if planning were to have a powerful integrative role, the system needed 'to be given intellectual credibility and rescued from political spin' (2004, 314). Yet in the ensuing eleven years, the political spin has undoubtedly accelerated. What more will it take to convince politicians that robustly evaluating development proposals in light of the potential specific and cumulative flood risk they may engender is an essential planning function; not simply part of a 'dither' holding England's economic growth in paralysis?

*Karen Potter's research (2007-2011) was supported by the Economic and Social Research Council.*

## References

- Baker, G. (2008). As flood waters recede, blame game can begin. *The Times* (London), October 21. <http://www.thetimes.co.uk/tto/business/columnists/article2619753.ece>.
- Bawden, T. & Clark, N. (2014). Why do we insist on building on flood plains? *The Independent*, 2 February. <http://www.independent.co.uk/environment/nature/the-more-the-experts-warn-against-the-more-we-build-on-flood-plains-9101710.html>.
- BBC News (2007). Flood plain homes 'not ruled out'. [http://news.bbc.co.uk/1/hi/uk\\_politics/6911119.stm](http://news.bbc.co.uk/1/hi/uk_politics/6911119.stm).
- Brannigan, T. (2007). Houses can be built on flood plains, minister insists. *The Guardian*, 24 July 2007. <http://www.guardian.co.uk/uk/2007/jul/24/communities.weather1>.
- Brown, J.D. and Damery, S.L. (2002). Managing Flood Risk in the UK: Towards an Integration of Social and Technical Perspectives. *Transactions of the Institute of British Geographers*, New Series, 27(4), pp. 412-426.
- Butler, C. & Pidgeon, N. (2011). From 'flood defence' to 'flood risk management': exploring governance, responsibility, and blame. *Environment and Planning C: Government and Policy*, 29, 533-547.
- Committee on Climate Change (2014). Policy note: flood and coastal erosion risk management spending, 21 January 2014. <http://www.theccc.org.uk/publication/policy-note-flood-and-coastal-erosion-risk-management-spending/>.
- Committee on Climate Change (2014b). Survey of a Sample of Development Applications Within Flood Risk Areas Final Report, AMEC Environment & Infrastructure UK Limited, 7 April 2014.

- Committee on Climate Change (2014). Climate change – is the UK preparing for flooding and water scarcity? Adaptation Sub-Committee Progress Report 2012.
- Cowell, R. (2010). Revisiting ... Governing space: planning reform and the politics of sustainability. *Environment and Planning C: Government and Policy*, 28, pp. 952-957.
- DCLG (2011) *A plain English guide to the Localism Act* <https://www.gov.uk/government/publications/localism-act-2011-overview>.
- Defra (2004). Making space for water, taking forward a new Government strategy for flood and coastal erosion risk management in England. First Government Response to the Autumn 2004 Making Space for Water Consultation Exercise. London: Department for Environment, Food and Rural Affairs.
- Defra (2005). Making space for water, taking forward a new Government strategy for flood and coastal erosion risk management in England First Government response to the Autumn 2004 Making space for water consultation exercise, March 2005. London: Department for Environment, Food and Rural Affairs.
- DIRECTGOV (2007). £8 billion investment in homes for the future. [http://webarchive.nationalarchives.gov.uk/+www.direct.gov.uk/en/N11/Newsroom/DG\\_069396](http://webarchive.nationalarchives.gov.uk/+www.direct.gov.uk/en/N11/Newsroom/DG_069396).
- Douglas, I. (1976). Urban Hydrology. *The Geographical Journal*, 142(1), pp. 65-72.
- EA (2012). Development and flood risk - annual reporting. <http://www.environment-agency.gov.uk/research/planning/33704.aspx> <accessed 20 July 2013>.
- European Council (2007). EU Directive of the European Parliament and of the European Council on the estimation and management of flood risks (2007/60/EU).
- Evans, E. (2004). Foresight: future flooding: scientific summary: volume I: future risks and their drivers.
- Goodson, J.M. (2011). Briefing: Keeping up with the Suds revolution and legislative evolution. *Municipal Engineer*, 164 (2), 67-70.
- Grove-White, R. (1991). Land Use Law and the Environment. *Journal of Law and Society*, 18(1), pp. 32-47.
- Johnson, C., Penning-Rowsell, E.C. & Parker, D. (2007). Natural and imposed injustices: the challenges in implementing 'fair' flood risk management policy in England. *The Geographical Journal*, 173 (4), 374-390.
- Kelly, M., Selman, P. and Gilg, A. (2004). Taking sustainability forward relating practice to policy in a changing legislative Environment. *Town Planning Review*, 75(3), 309-335.
- Lord, A. & Tewdwr-Jones (2014), Is Planning "Under Attack"? Chronicling the Deregulation of Urban and Environmental Planning in England. *European Planning Studies*, 22(2), 345-361.
- Moss, T. (2007). Institutional drivers and constraints of floodplain restoration in Europe. *International Journal of River Basin Management*, 5(2), 121-130.
- Pickles, I (2014). Oral statement to Parliament, Government action taken to respond to floods and extreme weather, 6 February. <https://www.gov.uk/government/speeches/government-action-taken-to-respond-to-floods-and-extreme-weather>
- Pitt, M. (2008). The Pitt Review: Learning Lessons from the 2007 Floods, an Independent Review by Sir Michael Pitt. Cabinet Office, Whitehall, London.
- Potter, K. (2013). Flooding Policy Bottlenecks in England. In Warner, J. F., van Buuren, A. and Edelenbos, J. (eds). *Making Space for the River, Experiences with Multi-functional River Planning in the US and Europe*. London: IWA Publishing.
- Reeves, N. (2011). A builders' charter. CIWEM, World Press.
- Smulian, M. (2015) Turning the Tide. *The Planner*, January 2015.

- Stedman, M.B. (1958). The Townscape of Birmingham in 1956. Transactions and Papers (Institute of British Geographers), 25, 225-235.
- Tewdwr-Jones, M. (2008). The complexity of planning reform: a search for the spirit and purpose of planning. *Town Planning Review*, 79(6).
- Mark Tewdwr-Jones (2015). Mark Tewdwr-Jones — United Kingdom, disP - *The Planning Review*, 51 (1), 84-85.
- The Telegraph (2011). Hands Off Our Land: 'Flood risk' to homes if planning reforms go ahead, 19 September.
- The Times (1926). Town Planning at Oxford. Inherited Beauty, 7 September.
- The Times (1928). Floods at Oxford. Work of Preservation Trust, The Times (London), 11 January.
- The Times (1961). 'Power Vacuum' in Planning will have to be Filled, The Times (London), 26 October.
- The Times (2000). New Guidelines Restrict Building in Danger Zones Planning Curbs, The Times (London), 14 October.
- The Times (2001). Builders ignore warning on flood plain danger, The Times (London, England), 27 October, 17.
- The Times (2012). Their backyards are safe - what about yours? Ignore these self-serving tycoons. It's not the planning system that is stifling development, The Times (London), 20 September, 24.
- Wainwright, O. (2014). What Cameron's bonfire of the building regulations will do to our homes. The Guardian, 27 January.
- Werrity, A. (2006). Sustainable Flood Management: Oxymoron or New Paradigm? *Area*, 38(1), 16-23.
- Wheater, H. and Evans, E. (2009). Land use, water management and future flood risk. *Land Use Policy* 26, 251-264.
- Wills, T. (2014). The scandal of 200,000 homes built on flood plains. The Mirror, 12 February.
- Wilson, G. (2007). New homes will be built on flood plains. The Telegraph, 23 July.